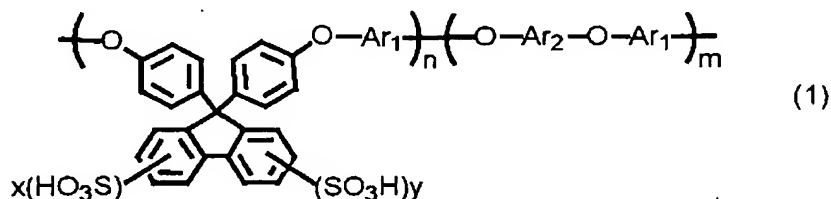


ABSTRACT

For the purpose to provide an electrolyte membrane superior in the properties such as conductivity and stability, this invention provides a sulfonated aromatic polyether characterized in that the principle backbone is represented by the general formula (1).
(Chemical formula 1)



In the general formula (1), Ar₁ and Ar₂ are C₆₋₂₀ groups containing aromatic ring(s) each of which is selected independently, the group containing aromatic ring(s) may contain aromatic ring(s) selected from phenylene group and naphthylene group, and the plural phenylene groups may be bonded to each other via a heteroatom such as N, O, S, a ketone group, a sulfone group or an aliphatic group in the group containing aromatic ring(s), or the hydrogen atoms in the aromatic ring may be partially substituted with an aliphatic group, a halogen atom, a perfluorinated aliphatic group or a sulfonic acid group. In the general formula (1), x and y are each integer of 0 to 3 which represent the degree of sulfonation, with the proviso that the case where both of x and y are simultaneously 0 is excluded, and n and m are each an integer of not lower than 2 which represent the degree of polymerization. In the sulfonated aromatic polyether according to this invention, the sites of introduction of the sulfonic acid groups are strictly specified, and the aromatic rings in the main chain has no sulfonic acid group at all, therefore, it is advantageous in that both of proton conductivity at higher than 100° C and oxidative and hydrolytic stability are superior.